AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1-3 (cancelled)

Claim 4 (original): A method for detecting whether the alignment of bit line contacts and active areas in DRAM devices is normal, comprising:

providing a wafer with at least one scribe and at least one memory area;

forming a plurality of memory cells in the memory area and at least one test device in the scribe line simultaneously, wherein the memory area has bit line contacts and active areas, the test device including:

a bar-type active area disposed in the scribe line, having a center;

a bit line contact disposed on the center of bar-type active area;

a bit line having a center coupled to the bit line contact, and a first terminal and a second terminal, wherein the bit line is essentially perpendicular to the bar-type active area; and

two plugs disposed on the first terminal and the second terminal of the bar-type active area respectively, wherein the two plugs are electrically coupled to the first terminal and the second terminal of the bar-type active area respectively;

detecting a first resistance by the first terminal of the bit line and one of the two plugs;

detecting a second resistance by the second terminal of the bit line and the other of the two plugs;

determining whether the alignment of the bit line and the bar-type active area of the test device is normal according to the first resistance and the second resistance; and

determining whether the alignment of the bit line contacts and the active areas in the memory areas is normal according to whether the alignment of the bit line contact and bar-type active area of the test device.

Claim 5 (original): The method as claimed in claim 4, wherein the test device further comprises two word lines disposed above two sides of the bar-type active area respectively, and the two word lines are essentially parallel to each other.

Claim 6 (original): The method as claimed in claim 4, wherein the alignment of the bit line contact and the bar-type active area is abnormal if the first resistance is not equal to the second resistance.

Claim 7 (original): A method for detecting whether the alignment of bit line contacts and active areas in DRAM devices is normal, comprising:

providing a wafer with at least one scribe and at least one memory area;

forming a plurality of memory cells in the memory area and at least one test device in the scribe line at the same time, wherein the memory area has bit line contacts and active areas, the test device including:

a bar-type active area disposed in the scribe line, having a center, a predetermined width, and a predetermined resistivity;

a bit line contact disposed on the center of bar-type active area;

a bit line having a center coupled to the bit line contact, and a first terminal and a second terminal, wherein the bit line is essentially perpendicular to the bar-type active area; and

two plugs disposed on the first terminal and the second terminal of the bar-type active area respectively, wherein the two plugs are electrically coupled to the first terminal and the second terminal of the bar-type active area respectively;

detecting a first resistance by the first terminal of the bit line and one of the two plugs;

detecting a second resistance by the second terminal of the bit line and the other of the two plugs;

determining whether the alignment of the bit line and the bar-type active area of the test device is normal according to the first resistance and the second resistance; and

determining whether the alignment of the bit line contacts and the active areas in the memory areas is normal according to whether the alignment of the bit line contact and bar-type active area of the test device.

Claim 8 (original): The method as claimed in claim 7, wherein the alignment of the bit line contact and the bar-type active area is abnormal if the first resistance is not equal to the second resistance.

Claim 9 (original): The method as claimed in claim 8, further comprising a step of determining the alignment shift of the bit line contact and the bar-type active area according to the first resistance, the second resistance, the predetermined width and the predetermined resistivity.

Claim 10 (original): The method as claimed in claim 9, wherein the alignment shift (_L) is determined by an equation:

$$\Delta L = W \times \frac{R_1 - R_2}{2R_{AA}};$$

wherein R_1 is the first resistance, R_2 is the second resistance, R_{AA} is the predetermined resistivity and W is the predetermined width.